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ABSTRACT

This workbook documents the implementation of a technology plan for the 34 Catholic schools in the Diocese of San Jose (California) during 1994-97. Chapter 1 summarizes the following six steps in the technology planning process: (1) determining the current status and gathering information; (2) getting organized; (3) establishing direction and writing goals; (4) building the plan with strategies; (5) making the plan a reality; and (6) evaluating and adjusting the plan. The Diocese of San Jose's Masterplan is presented in the next chapter, including mission statement, goals and strategies recommended by the planning committees, and charts identifying the groups (i.e., Department of Education of the Diocese, principals, teachers, and technology taskforce) responsible for completing these strategies. Chapter 3 reports the work done by the taskforce for each of the goals and strategies. Several items developed by the planning committees are contained in this chapter, including a technology planning guide, a hardware evaluation form, a list of resources for teachers, minimum technology standards for hardware, Internet access options, teacher competency goals, student competencies by grade level, technology rules and code of ethics, and a technology use agreement. Chapter 4 describes the principals' role in the planning process. The advantages of diocesan-wide planning are considered in Chapter 5. Two appendices list the goals and strategies directed toward the Department of Education and teachers. (MES)

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and how to get there from here

A Model for Developing and Using a Diocesan and School Site Educational Technology Plan

Marian Stuckey

National Catholic Educational Association

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CONTENTS

Foreword		v
About the Author		vii
Introduction		ix
Chapter One:	A Process for Planning	1
	Summary of the Planning Process	2
	Determining the Current Status and Gathering Information	
	Getting Organized	
	Establishing the Direction and Writing Goals	
	Building the Plan with Strategies	
	Making the Plan a Reality	
	Evaluating and Adjusting the Plan	
Chapter Two:	The Diocese of San Jose's Masterplan	11
Chapter Three:	The Taskforce's Work	21
Chapter Four:	The Principal's Work	53
Chapter Five:	The Advantages to Planning Together	59
Appendices		
	A: Masterplan Goals and Strategies Directed Toward the Department of Education	61
	B: Masterplan Goals and Strategies Directed Toward theTeachers	64

LIST OF FIGURES

Figure 1:	Principal and Technology Coordinator Sample Interview Questions	9
Figure 2:	Planning Guide	38
Figure 3:	Hardware Evaluation Form	39
Figure 4:	Resources for Teachers	40
Figure 5:	Minimum Technology Standards for Hardware	42
Figure 6:	Internet Access Options	43
Figure 7:	District Licensing	44
Figure 8:	Teacher Competencies	45
Figure 9:	Student Competencies by Grade Level	47
Figure 10:	Rules and Code of Ethics	50
Figure 11:	Technology Use Agreement	52

FOREWORD

It is with both pride and a sense of urgency that we at NCEA offer *From Chalkboard to Chatroom...and how to get there from here.* Our pride is rooted in the expertise and the generosity of the author, Marian Stuckey, assistant superintendent of schools in the diocese of San Jose, and the vision and support of Claude Power, PBVM, superintendent of schools also at the diocesan office in San Jose. Their shared insight into the positive impact technology could and does have on education, on communication and on the enhanced support for the mission of a community of schools launched their efforts and focused diocesan and school resources early in the 1990s. Marian's expertise and their shared leadership initiated a process that has given a community of schools a distinct advantage in planning and implementing technology effectively.

The element of generosity cannot be overlooked or minimized. This publication is an outgrowth of a presentation that Ms. Stuckey offered at the first national institute on curriculum, instruction and technology for Catholic secondary school instructional leaders during the summer of 1996 at Seattle University. As a result of multiple requests the author has crafted for dissemination a highly transferable model both in terms of content and process. Because of the thorough review of this manuscript by Rev. Thomas Toale, Superintendent of Schools, the Archdiocese of Dubuque and Vice President, the Department of Chief Administrators of Catholic Education (CACE); Br. Bill Clifford, CSC, technology coordinator, Notre Dame High School, Flushing, New York; and Natalie Krupka, technology coordinator, Holy Cross School, Garrett Park, Maryland; the reader is provided with a useful map that can be followed or used as a reference in modifying the planning journey. In addition, Kathy Bayly and Tracy Toon joined their efforts and insights to present a highly readable and clear explanation of the planning process.

Coupled with pride is a sense of urgency. Technology decision-making has far reaching consequences due to the extensive commitment of resources. Often these decisions must be made in the face of ever evolving applications due to rapid developments both in technology hardware and software. For this reason, we present this publication as a workbook. As you proceed with your school's or office's regular technology planning, it is expected that the content of your strategies may read differently that those of the schools in the San Jose Diocese; but, the direction

established by the goals, organizational structure and shared process used in San Jose provide a framework that is valid for the present and future.

We hope that you agree that it is more than whimsical to recognize the frontier spirit in this publication. It is as if a wagon train went on ahead, at certain risk and with undaunted enthusiasm, and the trailblazers are now sharing the information and wisdom gained from the journey—where to find the streams, deserts and mountain passes. Our friends in San Jose now await news of the many other technology treks taking place across the land and of the grand discoveries made in the process.

In the spirit of the Feast of the Transfiguration, we offer you *From Chalkboard to Chatroom...and how to get there from here.*

Mary Frances Taymans, SND, EdD
Associate Executive Director
NCEA, Secondary Schools Department

August 6, 1997

ABOUT THE AUTHOR

Marian Stuckey's professional career in Catholic education, begun in elementary and secondary school classrooms, has extended to the secondary principalship and the superintendent's office. Spending the greater portion of her career serving 17 years as principal of Presentation High School, San Jose, California, Ms. Stuckey is now beginning her fifth year as assistant superintendent of schools in the Diocese of San Jose. Her current responsibilities include addressing all technology issues at the K-12 level, specifically guiding the development and implementations of the diocesan technology masterplan.

Ms. Stuckey's relationships with Catholic schools extend past the California border. She has presented frequently on technology planning at the National Catholic Educational Association's (NCEA's) Annual CACE Meetings and other national conferences and institutes. *From Chalkboard to the Chatroom* developed from Ms. Stuckey's comprehensive session at NCEA's Curriculum, Instruction, Technology and You (CITY) institute held June 1996, in Seattle, Washington. She has also shared her professional expertise as an executive committee member of NCEA's secondary schools department.

INTRODUCTION

There is no question but that the use of technology in the classroom will enhance knowledge and improve teaching and learning. Technology is a very powerful tool that has already changed the way the world communicates for both business and entertainment. Technology has the potential to change dramatically the way teachers teach and students learn. However, there are a number of compelling issues that make the integration of technology into the curriculum very challenging indeed. Given the number of issues and their complexity, it is my opinion, that good planning must be done at many levels and that dioceses and schools need to collaborate in order to accomplish the task. It is the bias of this author and this book that significant leadership should come from the diocesan office, bringing together representatives from K-12 schools, parent and business communities to do the planning. The planning done at the diocesan level should be mirrored at the individual school site; in fact, diocesan goals and strategies may be used, with specific site level applications, at the school level.

This workbook is actually a journal of how one diocese, the Diocese of San Jose, California, approached the planning process for its thirty-four schools. It chronicles the implementation of the plan, beginning in 1994 and concluding in June, 1997. In publishing this journal, it is hoped that the approach used here can offer others a kind of blueprint for planning and implementation in other dioceses and school sites.

This workbook will attempt to do three things: offer a process for planning at the diocesan and school site levels; share accomplishments and materials developed in the two years since the diocesan Masterplan was completed; and, discuss briefly the advantages of working together as a diocesan community of schools.

The workbook contains materials freely given over the past three years at a number of conventions and meetings. It also contains similar materials used in other NCEA publications. This workbook attempts to compile the materials, to add some additional documents and to present them here for you to adapt and use at will.

Marian Stuckey

This moment in history is like no other in the recent past. The computer is revolutionizing, indeed, has revolutionized, the way we do business, the way we communicate, the way we spend leisure time, and, perhaps most importantly, the way we teach and the way we learn.

The merging of the telephone, the TV and the computer give us a power that we have simply never had before. It is a power much greater than any of the three technologies on their own. Because of this power, anyone who wants to participate in the present and help mold the future must master the technology.

—Mission Statement
Diocese of San Jose's Masterplan

...The forces unleashed by technology must be mastered...As increasingly capable machines join Americans at the workplace, join them as both co-workers and competitors, the payoff to education and training has soared, and the penalty for lacking skills has stiffened.... While the information highway promises to speed some people to desirable destinations, it may leave others stranded in the technological version of inner-city ghettos.

— Cupertino School District Technology Plan

All of our children deserve the opportunity to be a part of the daily discoveries involved in using this incredible tool, in this developmental moment which will not be here again. And, though our students will use the technology without us, they cannot bring the full potential of the technology into the classroom. We who teach must determine what and how to integrate technology into the learning experience.

— Marian Stuckey

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Chapter One:

A PROCESS FOR PLANNING

Even a cursory look at the issues of technology and technology integration suggests that the task would be daunting for any individual school. It just makes sense that planning would be done and responsibilities assumed at every level of the educational community: the state and region, the archdiocese/diocese, the school community and individual teachers and staff. It also makes sense that leadership for planning comes from the diocesan office working with a taskforce of representatives from the entire school community.

Even though the diocese and taskforce should assume a significant role in the leadership of this project, it is clear that the principal of each individual school is the key to successful planning and implementation at the school level. The principal must be committed to mirroring, at the school site, the same type of planning and implementation process done by the diocesan taskforce. It is the role of the principal to articulate a vision for the individual school and to inspire others to join the effort; generally, when this happens, parents and the business community respond to that vision and eagerly work with the school in raising the needed funds. Since the funding and the subsequent preparation of the facility and purchase of equipment is the direct responsibility of the principal, discussions need to take place at principal meetings, both group and individual, prior to and throughout the planning process. It is also important that principals are represented on the taskforce.

This workbook will focus mainly on the work of the taskforce and the principals, although as the readers look at the materials in the book, it will be clear that there are significant roles to be played by the other groups as well. It is also hoped that the readers will be able to use the process as described here to develop a planning process at the diocesan or school site level.

There are two major goals for a diocesan or school taskforce: to create a product and to develop an on-going process. First, the taskforce develops a long-range technology plan, including lists of resources, guidelines and recommendations for student and teacher competencies, inservice ideas, security and maintenance solutions and, above all, ways to integrate technology into the curriculum. This masterplan can then be used by principals in the development of a school site technology plan.

Second, a planning process is initiated. The development of a planning process

There are two major goals for a diocesan or school taskforce: to create a product and to develop an on-going process.

begins with this specific project which brings people together to envision what is possible, encourage one another to continue pursuing technology goals, brainstorm new ideas and be a resource for one another. This second goal is actually the more important. The fact that there is a group and a process for planning and implementation in the diocese will insure that the plan is not created and left on a shelf.

The taskforce formed for the purpose of developing the initial plan should continue meeting once or twice a year to implement, modify and, eventually, rewrite the plan. Coming together for the focused task of completing a plan will result in a planning attitude that goes far beyond the production of the plan. The planning process below records how a particular diocese developed a process and created a successful plan for integrating technology into its schools.

Summary of the Planning Process

In 1993, it became apparent that the diocese needed a long-range technology plan. There were a number of planning processes that had been developed by various companies. However, most of these plans were too complicated for our use. It was judged that a simpler process was needed; therefore, a planning process that met the diocesan and school needs was developed. The steps were identified as

Step One:	Determining the current status and gathering information
Step Two:	Getting organized
Step Three:	Establishing the direction
Step Four:	Building the plan with strategies
Step Five:	Making the plan a reality
Step Six:	Evaluating and adjusting the plan

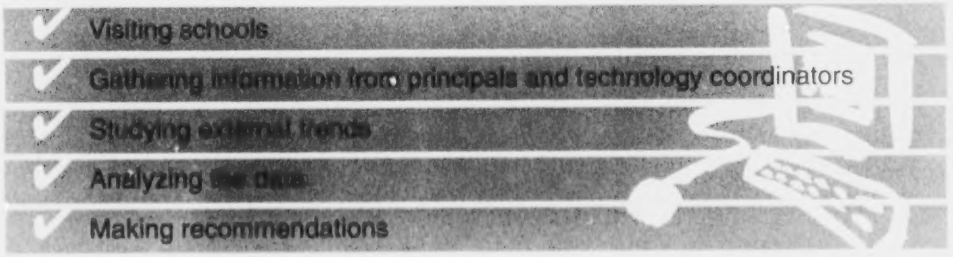
The planning process was then divided into three phases:

- Phase One: frcm September to December 1993, steps one and two were accomplished.
- Phase Two: from January to June 1994, steps three and four were accomplished.
- Phase Three: beginning Fall 1994, steps five and six were begun.

Twenty-three members formed the taskforce: principals and teachers from the K-12 schools, parents, outside consultants and the staff from the diocesan department of education. Over a nine-month period, a three-year masterplan and an ongoing process for implementation and evaluation were developed by the taskforce using the planning process listed above. The masterplan, completed June 1994, concluded with the publication and distribution of the masterplan to the schools. More detail about each of the six steps follows.

Step One:
Determining the Current Status and Gathering Information

Tasks included:



As assistant superintendent, I completed much of this first step at the department of education. However, these activities could well be done by a technology taskforce. Some of the activities undertaken during this step were

- attending regional technology meetings and conventions
- visiting all school campuses
- taking an inventory of current hardware acquisitions
- interviewing principals and technology coordinators
- conducting surveys with principals and tech coordinators
- compiling and analyzing data and making recommendations based on data
- sharing the results of the data with all segments of the community

This step took three months to complete, starting in September and ending in December 1993. During this first step, every possible agenda was used to keep our constituencies aware of the progress of our information gathering and data analysis. At the conclusion of this time period and the completion of the tasks listed, a clear profile of the technological needs of the schools merged. This profile was given to the taskforce at its first meeting. The data assisted the committees to begin work immediately on goals and strategies intended to meet the needs of the schools.

Of all the activities done during this three-month period, by far the most useful and productive was visiting every campus, surveying the technology coordinators and interviewing the principal. Interview and survey questions asked principals and technology coordinators appear at the end of this chapter in Figure 1.

The results of the initial school visits and surveys of principals and technology coordinators are included here. This data clearly identified three major needs and led me to make ten recommendations to the principals at the outset of the planning process.

Major Needs

1. Funding for hardware, software and staff development
2. Methods to integrate technology into the curriculum
3. Assistance for principals concerning the necessary steps to develop technology use in their schools

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Recommendations for Principals

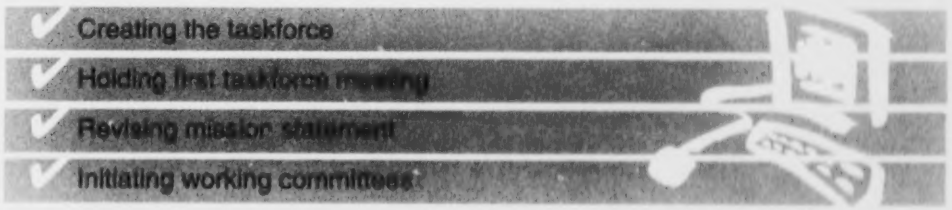
1. Model desired behaviors for teachers and staff by being a computer-user
2. Reward the most creative teachers who are already integrating the use of technology into their teaching
3. Visit neighboring schools, both public and private
4. Spend quality time planning with computer/technology resource teachers
5. Provide sufficient time and a clear job description for computer technology personnel
6. Begin to find parents with computer expertise and invite them to work with you
7. Commit to developing a 3-5 year technology plan based on the diocesan plan
8. Develop some funding options for technology
9. Take a strong leadership/advocacy role with faculty and other publics around the issue of technology
10. Articulate the school's vision of technology to pastors, boards, parent groups, faculty, students, business representatives and others

These two lists and the supplemental data were distributed to the taskforce at its first meeting.

At the school level, principals as their first step of planning were encouraged to gather data about their individual schools. The gathering of information could be done by the principal or, perhaps, more practically, by a committee of faculty and staff. An important part of local information gathering is the interviews of stakeholders: students, parents, faculty and staff and local businesspeople. This data provides a school profile for the school taskforce.

Step Two: Getting Organized

Tasks include:



In December 1993, a taskforce was established. In the beginning, ten people were invited to join; among these were principals, a parent, a consultant, technology specialists and classroom teachers from the elementary and secondary schools. These people were very involved in various aspects of technology in their own schools. All of them accepted the invitation to be part of this process. An open invitation was then sent to all the personnel of the schools. Ten additional people volunteered, mainly elementary classroom teachers and elementary and secondary technology coordinators. With the three staff members from the diocese's department of education, the taskforce totaled twenty-three members.

Three four-hour meetings were scheduled for the diocesan technology taskforce,

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one each in February, March and April 1994. The department of education would be responsible for minimizing the work of the taskforce outside of the three meetings by writing first drafts and organizing the work of each committee. The hope was that very busy, very competent people would remain on the taskforce. What was needed from the taskforce members were their ideas and their ability to judge the work of each other. They also needed to be certain that working principals and school communities could implement the goals and strategies being developed. Below is a copy of the first taskforce agenda.

First Taskforce Meeting Agenda

At the first meeting in February, the following tasks were accomplished:

- offering an explanation of the six step process for the planning (See pp.1-2)
- developing the goals of the taskforce both product and process
- delivering a summary of Step One results, which covered surveys, interviews and needs assessments among other topics
- surveying taskforce members

The taskforce discussed some key questions:

1. How should technology support the curriculum? (Using technology as a tool)
2. How do we intelligently plan for technology integration? (By developing a technology plan)
3. How de we implement complex network technologies? (Concern ourselves with networking options and staffing concerns)
4. Where does the Internet fit into all of this? (In school-wide access-challenging technologies and addressing control issues)
5. How do we prepare staffs to use the technologies? (Integrate staff development in the plan)
6. How do we secure our networks from unauthorized access? (Implement technology safeguards, student and staff written agreements, by teaching computer ethics)
7. How do we fund all this? (Identify funding and developing budgets)

Four technology taskforce committees were established to address these issues. The four committees were:

I. Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking
II. Curriculum Applications, Software Selection and Evaluation
III. Staff Development, Recommendations for Teacher and Student Competencies
IV. Administrative Uses, Funding, Security, Maintenance, Ethical Use

At the school level, principals were encouraged to implement this second planning step by establishing taskforces that included and invited volunteer members of the school community, setting initial meeting dates, sharing data gathered about the school needs, assigning committees to consider the areas that the diocesan taskforce were considering and beginning work on a school mission statement.

Step Three:
Establishing the Direction and Writing Goals

Tasks include:

- ✔ Holding the second taskforce meeting
- ✔ Developing goal statements

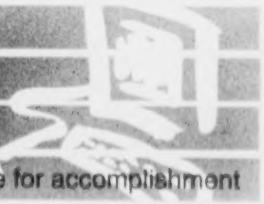
Second Taskforce Meeting

During the second taskforce meeting in March 1994, the four committees were given worksheets to assist them in shaping goals, which would be directed toward principals, the department of education, the teachers and the taskforce. After working about two hours on the formulation of three to five goals per committee, the committees returned to the large group. The goals of each committee were read and discussed with the entire taskforce. Recommendations were made to the committees who, in turn, rewrote, deleted and/or added goal statements. It was suggested that revisions be made before the third meeting in April. At the conclusion of this meeting, the taskforce left content approval to each committee's purview. At the school level, principals were encouraged to adapt the diocesan goals to local needs. Most site level plans did indeed have goals very similar to those of the diocesan masterplan.

Step Four:
Building the Plan with Strategies

Tasks include:

- ✔ Holding the third taskforce meeting
- ✔ Writing strategies for each goal
- ✔ Starting a time line
- ✔ Directing strategies to persons or groups responsible for accomplishment



Third Taskforce Meeting

This step called for each of the four taskforce committees to write specific strategies for each goal. Typically, there would be two or three strategies written for each goal. The strategies detail an action, name who is responsible for the accomplishment of the action and state when the action is to be accomplished. There were four people or groups who would take primary responsibility for each strategy: the department of education, the principal, the teachers and/or the taskforce. (See Chapter Two for more information on this topic.) Writing the strategies took the first half of this meeting. All committees reported back to the entire taskforce, reading their goals and strategies. Final approval was given to the content of the plan by the end of this meeting. Following the meeting, I, as a member of the taskforce, edited the masterplan and prepared it for distribution. It was first sent to the taskforce for a final approval.

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Step Five:
Making the Plan a Reality

Tasks include:

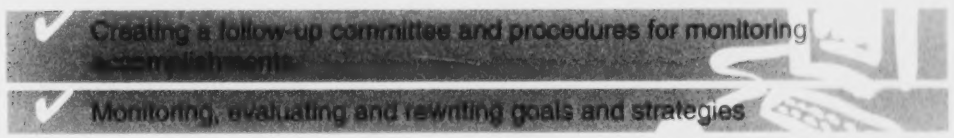
Follow Up Meeting with Taskforce

Once the plan was finished and appropriate approval granted by the taskforce and the superintendent of schools, it was time to present the plan to the principals of the schools, some of whom participated on the taskforce. The plan was first presented at the August 1994 meeting of principals. There was an hour presentation on the goals and strategies that were the responsibility of the principal of each school. There was time for comments and questions from the principals. Throughout the first year, aspects of the masterplan were discussed at regularly scheduled principals' meetings. In fact, the implementation of the masterplan was a regular item on every principals' meeting's agenda throughout the year. This same format was used at technology coordinators' and curriculum coordinators' meetings.

At the school level, strategies need to be written in the same fashion. Likewise, following pastor and/or board approval of the plan, communication and distribution of the plan must take place.

Step Six:
Evaluating and Adjusting the Plan

Tasks include:



This is a very important step. Earlier in the chapter, I referred to the fact that the taskforce should stay together beyond the writing of the masterplan. Since publishing the masterplan in June 1994, the diocesan taskforce has met six times, twice each year. It is the taskforce who continues to call each group to accountability for the completion of the plan. The procedure is to require that the department of education, the principals and the taskforce produce annual written reports which detail the degree of implementation of each strategy. The taskforce reviews those reports and, in turn, makes some further recommendations or adjustments to the plan. For example, during the 1996-97 academic year, the taskforce added an entire section to the masterplan dealing with recommendations for accessing the Internet on each campus and for networking the local campuses. These reports are compiled, edited, duplicated and distributed to principals by me to be shared at the school site.

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Schools need, as well, to establish procedures for follow-up and accountability in order that the plan, once completed, not simply sit on a shelf.

FIGURE 1
Principal and Technology Coordinator
Sample Interview Questions

- How much equipment do you have on campus? Where is it located? What are your greatest challenges in the area of facilities/equipment?
- How technologically competent are your teachers? Do you have a computer resource teacher? How many hours does the coordinator work per week?
- What kinds of programs are used for students? Do you have good curriculum application programs? In what areas?
- How much time are students in lab? How much of this time is hands-on?
- Do you have a site plan?
- What are you doing for teacher in-service?
- Who communicates with your teachers and what resources are available: computer resources, magazines, meetings, minutes of meetings?
- Who is your most creative computer user?
- How have you funded the project(s) you have? Are parents involved?
- What are your greatest challenges?
- Describe the level of your computer skills. What programs do you use?
- Any suggestions or comments for us?

Chapter Two:

THE DIOCESE OF SAN JOSE'S MASTERPLAN

Perhaps the most valuable part of this workbook follows: the Masterplan. When the plan was published, it was published in two formats. The first listed simply the recommendations of each of the four committees. The second was a color-coded format achieved by a "cut-and-paste" method. It presented the goals and strategies to each of the four groups responsible for their accomplishment: department of education, principals, teachers and technology taskforce. The taskforce believed that directing goals and strategies to specific groups would facilitate accountability to the accomplishment of the goals and strategies.

The entire Masterplan is listed below, including each committee's goals and objectives and a chart that identifies the groups responsible for completing the tasks.

The Masterplan

Mission Statement

The emergence and availability of modern technologies, and the merging of these technologies (TV, the computer, the modem, the laserdisc, and the CD-ROM) have the potential of reinvigorating the way teachers teach and learners learn. These technologies have the power to give all students the same opportunities to learn, the power to bring the entire world of research and beauty within a keystroke, the power to unleash creativity and excitement in all our students.

The Department of Education of the Diocese of San Jose enthusiastically supports the efforts of planning for the effective implementation of these technologies in the classrooms, the libraries, the labs and the offices of all elementary and secondary schools. The department realizes that there is a role for the department as a whole and one for each school individually in incorporating technology in every aspect of our educational system. We respect and support creative and individual approaches to the integration of technology into the curricula of the schools. At the

same time, the department commits itself to taking a leadership role in assisting in planning and implementation for the future use of technology in our educational system.

The challenge before us is to envision what is possible, to assist our teachers in understanding the power of the technologies in revolutionizing all aspects of education, to plan carefully and realistically in order to avoid costly mistakes, to enlist the help of parents, administrators, business and boards and to discover sources of funding to support constant upgrading and progress.

Specifically, the technology taskforce commits itself to developing a comprehensive plan with goals and strategies which will guide our efforts over the next three years in the areas of facilities preparation, hardware acquisition, curriculum application, software selection, inservice opportunities, guidelines for student and faculty competency, administrative uses, maintenance, security and funding.

The goal of all of these efforts is to offer the best educational opportunities for all students to reach their potential and to allow them to learn with excitement, a sense of discovery and a sense of wonder.

Committee I: Computer Hardware, Multi-Media Resources, Facilities Preparation and Planning for Networking

Goal 1: The technology taskforce recommends that all schools develop a three to five year technology plan and, to facilitate that planning, enlist the services of a consultant or technical specialist.

- **Strategy 1:** The technology taskforce or another subcommittee will develop a planning outline by the beginning of the 1994-95 school year that will model a process for technology planning and identify planning resources.
- **Strategy 2:** Each principal in the diocese will commit to beginning a technology planning process by September 1994, with a targeted completion date of June 1995.
- **Strategy 3:** Each principal will develop a three to five year technology plan which will include, among other topics, a vision statement, development of financing and staff training by June 1995.
- **Strategy 4:** The department of education will collect computer planning documents and facility plans from the schools and make them part of a diocesan-wide technology sharing project.

Goal 2: The department of education will facilitate the sharing of hardware information among schools, especially the technology projects undertaken at the various school sites.

- **Strategy 1:** In the fall 1994, the technology taskforce will create a form for schools to detail a solution that was implemented on site regarding technology development, including the advantages and disadvantages of the recommended solution as well as information learned during the project or configuration.
- **Strategy 2:** For the 1994-95 school year, a system will be established by which diocesan teachers can share reviews of recently purchased hardware. The process may include written reviews or participation in a conference group over a diocesan-wide network.

- **Strategy 3:** The department of education will insure that information about hardware, including new products on the market, will be exchanged at technology coordinator meetings.

Goal 3: The department of education will investigate with Catholic Teachers Network (CTN) and other providers the feasibility and practicality of networking teachers, administrators and students throughout the system.

- **Strategy 1:** The superintendent and assistant superintendent will continue to meet with the staff at CTN and other providers to discuss the feasibility and viability of having an agency provide networking capability throughout the diocese, and communicate the outcome to the taskforce.
- **Strategy 2:** By May 1994, decisions concerning Internet access through SVPAL as a gateway, and using dedicated phone lines, will be made by CTN and the department of education and communicated to the thirty-four schools.
- **Strategy 3:** By June 1994, training will be given to a representative from each school who will be trained to assist other personnel in applying the resources of the Internet to enhance teaching and to connect all schools through email.
- **Strategy 4:** By June 1994, decisions concerning support personnel to assist schools with Internet connections and use, on site and on line, will be made by CTN and the department of education.

Goal 4: The department of education and individual schools will collaborate in providing information and training in the use of hardware.

- **Strategy 1:** By September 1994, each principal will designate one or more persons on site to be responsible for school computer hardware.
- **Strategy 2:** By September 1994, each principal will identify a paid or unpaid person that will be responsible for the repair, upkeep and maintenance of computer hardware.
- **Strategy 3:** By September 1994, the technology taskforce or a subcommittee will provide a resource list to all schools of off-site support phone numbers and resource specialists in the area of hardware maintenance and support services.

Goal 5: The technology taskforce will recommend to the principal of each elementary and high school, minimum standards for the acquisition of hardware for classroom and multimedia use and will publish the recommendation.

- **Strategy 1:** The technology taskforce will develop minimum technology hardware standards for classroom and multimedia use and will publish that for all elementary and high schools.

Goal 6: The technology taskforce recommends that all involved in planning, including administrators and technology resource personnel, develop a basic understanding of the technical issues related to networking.

- **Strategy 1:** By June 1995, each principal will designate one person onsite to be responsible for the school's network and identify a paid or unpaid person that will be responsible for repair, upkeep and maintenance of the school's network.
- **Strategy 2:** By June 1995, the technology taskforce or another committee will provide to all schools a computer networks resource list containing names of network specialists and phone numbers of off-site support services.

- **Strategy 3:** The department of education will include an overview of network issues in technology inservices, including the requisite hardware for networking.

The following diagram illustrates the group responsible for the implementation of various goals and strategies.

Committee I:
Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking

	Department of Education	Principals	Teachers	Taskforce
Goal 1				
Strategy 1				X
Strategy 2		X		
Strategy 3		X		
Strategy 4	X			
Goal 2				
Strategy 1				X
Strategy 2				X
Strategy 3	X			
Goal 3				
Strategy 1	X			
Strategy 2	X			
Strategy 3	X			
Strategy 4	X			
Goal 4				
Strategy 1		X		
Strategy 2		X		
Strategy 3				X
Goal 5				
Strategy 1				X
Goal 6				
Strategy 1		X		
Strategy 2				X
Strategy 3	X			

Committee II: Curriculum Applications, Software Selection and Evaluation

Goal 1: The technology taskforce will determine the most effective and efficient means of compiling and disseminating software evaluations done by professional educators.

- **Strategy 1:** The taskforce will review and research sources such as *The CUE* (Computer Using Educators) *Newsletter*, and the Apple K-12 *Curriculum Software Reference*, as well as other technology magazines and catalogues, and develop a plan for dissemination of this information during the 1994-95 school year.
- **Strategy 2:** A committee will research and review software produced by textbook companies for use with their texts; such review will be done during the appropriate year of adoption.
- **Strategy 3:** The taskforce will discuss the need for additional reviewing and evaluating software for instruction, teacher support, administration and special applications.

Goal 2: The taskforce will develop creative ways to involve teachers in the planning of technology integration into specific areas of the curriculum.

- **Strategy 1:** The department of education will consider appropriate funding options (e.g., grants, school subsidies) or other ways (e.g., CUE's) of compensating teachers for developing models/units for integrating technology into the curriculum.
- **Strategy 2:** The taskforce will consider creating curriculum development/tech integration teams to work on units (Math in 1994-95; science and social studies in 1995-96).
- **Strategy 3:** Once models of integration are developed by these select teams, the taskforce will determine the best way to disseminate the information and train other teachers in the diocese.
- **Strategy 4:** The taskforce will convene a telecommunications committee to explore and disseminate information regarding the use of the Internet and other on-line resources appropriate in an educational setting.

Goal 3: The technology taskforce recommends that all teachers integrate the use of technology into the curriculum on a regular basis beginning in the 1994-95 school year.

- **Strategy 1:** The taskforce recommends that specific annual technology goals should be set by principals and teachers and included into their personal/staff development plans.
- **Strategy 2:** The taskforce recommends that the principal include growth in knowledge of and integration of technology in teaching in the teachers' formal annual evaluations.
- **Strategy 3:** The taskforce recommends that the principal include technology education in school site inservice plans.
- **Strategy 4:** The taskforce recommends that the department of education and principals explore ways of providing teachers with more time to learn how to integrate technologies.

Committee II:
Curriculum Applications, Software Selection and Evaluation

	Department of Education	Principals	Teachers	Taskforce
Goal 1				
Strategy 1				X
Strategy 2				X
Strategy 3				X
Goal 2				
Strategy 1	X			
Strategy 2				X
Strategy 3				X
Strategy 4				X
Goal 3				
Strategy 1		X		
Strategy 2		X		
Strategy 3		X		
Strategy 4		X		

Committee III:
Staff Development, Recommendations for Teacher and Student Competencies

Goal 1: The taskforce recommends that all teachers stay informed about current computer/technology trends in education by participating regularly in training and inservice programs.

- **Strategy 1:** The principal will provide time monthly for presentations on computer/technology topics of general interest and need. These presentations will include creative uses of proven software/hardware as well as information about new products and may be conducted by the technology coordinator and/or classroom teachers; other presentations may be found on videotapes, or be downloaded from a network.
- **Strategy 2:** The principal will provide on-site training by professionals as needed to promote computer/technology competency. This training may include contracting with consultants/experts, acquiring training videotapes, arranging for vendor's presentations or having guest speakers from other schools.
- **Strategy 3:** The department of education will support and encourage continu-

ing growth in computer/technology competency by sponsoring diocese technology inservice days, training at cluster levels, technology video conferences in conjunction with CTN, and by arranging demonstrations and training sessions by vendors.

- **Strategy 4:** The department of education will sponsor and give direction to a technology coordinators' committee and require attendance at meetings by a representative from each school.
- **Strategy 5:** The taskforce encourages all to seek personal growth in computer/technology competency by participating in classes and workshops offered by local universities, the County Office of Education, the Institute of Computer Technology, the Tech Museum, computer stores, vendors, and by attending professional conferences such as the Computer Using Educators and MECC Conferences.

Goal 2: The taskforce recommends that principals offer training/inservice incentives and makes the following recommendations to the school site administration.

- **Strategy 1:** The principal of each school needs to require that each teacher have a technology goal as one of his/her yearly goals in the professional growth plan.
- **Strategy 2:** The evaluation of teachers and principals will include a technology component.
- **Strategy 3:** The principal will send at least one representative to a local technology workshop/convention annually.
- **Strategy 4:** The principal will provide release time to allow teachers to view technology at another school.
- **Strategy 5:** The principal will consider other incentives such as the following: contract renewal requirement, professional growth credit, release time, summer loan computers, access to materials for use in the classroom or office, stipends for hours spent in specific training.

Goal 3: All those teaching in the diocese should be able to do the following by the end of the 1994-95 school year:

- Demonstrate basic keyboarding skills
- Select and use appropriate software in teaching
- Access and use a network
- Use a database and/or spreadsheet for inventories, budgets, student records, rosters, etc., as needed.

Goal 4: Schools will implement extensive hands-on computer/technology experience for all students assuring that students attain skills and hardware/software competencies at specific intervals. The taskforce will establish specific recommendations for grade level proficiencies in the 1994-95 school year for implementation in 1995-96.

Committee III:
Staff Development, Recommendations for Teacher and Student Competencies

	Department of Education	Principals	Teachers	Taskforce
Goal 1				
Strategy 1		X		
Strategy 2		X		
Strategy 3	X			
Strategy 4	X			
Strategy 5			X	
Goal 2				
Strategy 1		X		
Strategy 2		X		
Strategy 3		X		
Strategy 4		X		
Strategy 5		X		
Goal 3			X	
Goal 4				

Committee IV: Administrative Uses, Funding, Security, Maintenance, Ethical Use

Goal 1: The taskforce recommends that principals analyze the ways technology can streamline and improve the quality and quantity of the work of the school for teachers and administrators including reports, newsletters, financial bookkeeping and reporting and, to accomplish this goal, makes the following recommendations:

- **Strategy 1:** The principal should provide a workstation, which would include a computer, a modem and printer access for the exclusive use of the faculty for the 1994-95 school year.
- **Strategy 2:** The taskforce will assemble recommendations of model packages for administrative use, including recommending that all administrative bookkeeping and recordkeeping be computerized in the 1994-95 school year.
- **Strategy 3:** Principals should insert four line items into the budget for the purchase of hardware, software, training and support of technology. If no funds are available for 1994-95, the line items may remain at zero for 1994-95 but should be addressed in 1995-96 budget.

Goal 2: The technology taskforce recommends that all users sign an ethical technology use agreement, which the taskforce will develop during the 1994-95 school year, including the following topics:

- Adherence to license agreements
- Restriction of use of privately-owned hardware and software
- Safeguards against computer viruses
- Purchase of computer-related supplies
- Security measures, such as:
  - maintenance of confidentiality
  - school ownership of information
  - safeguarding of data
  - storage of data

- **Strategy 1:** Technology users (e.g., staff, volunteers and students) will sign an ethical agreement before gaining access to the system.
- **Strategy 2:** The technology coordinator will be responsible for channeling purchase proposals and maintenance recommendations from the staff.

Goal 3: The technology taskforce recommends that principals provide adequate security for stand alone and networked technology. This includes the storage of documents, data, hardware and software.

- **Strategy 1:** The principal and the technology resource person are responsible for the development and maintenance of technology security issues.
- **Strategy 2:** The principal will educate the technology users regarding security concerns at the beginning of each year.
- **Strategy 3:** The taskforce will supply the schools with a list of basic information regarding security concerns in the fall of 1994. However, each school will need to analyze the potential security concerns of that particular site.

Goal 4: The taskforce recommends that principals obtain the services of trained personnel to maintain equipment. There are generally two or three levels of support

needed: onsite, contracted services, and expert advice.

- **Strategy 1:** The department of education will research the feasibility of a technical training course during 1994-95 school year to develop technology resource persons capable of performing onsite first level technology support. The cost of the training will be the responsibility of the school sites.
- **Strategy 2:** The taskforce will gather proposals and bids for diocesan-wide contracted technology maintenance and support at the second level by June 1995.

Goal 5: The taskforce recommends that the principal make financial projections for hardware, software, training and on-going materials and supply costs realizing that technology expenses are on-going.

- **Strategy 1:** The budgets of the schools should address the financial needs for the maintenance of current technology and build capital funds for the purchase of advanced technologies.

Committee IV: Administrative Uses, Funding, Security, Maintenance, Ethical Use

	Department of Education	Principals	Teachers	Taskforce
Goal 1				
Strategy 1		X		
Strategy 2				X
Strategy 3		X		
Goal 2				
Strategy 1		X	X	X
Strategy 2		X		
Goal 3				
Strategy 1		X		
Strategy 2		X		
Strategy 3				X
Goal 4				
Strategy 1	X			
Strategy 2				X
Goal 5				
Strategy 1		X		

Chapter Three:

THE TASKFORCE'S WORK

This chapter presents the goals and strategies directed at the diocesan technology taskforce according to the committees. Following each strategy is the taskforce's report detailing the progress made over the past three years. Any documents developed by the committee appear as figures at the end of this chapter.

Committee I: Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking

Goal 1: The technology taskforce recommends that all schools develop a three to five year technology plan and, to facilitate that planning, enlist the services of a consultant or technical specialist.

- **Strategy 1:** A diocesan committee (the taskforce or another subcommittee) will develop a planning outline by the beginning of the 1994-95 school year that will model a process for technology planning and identify planning resources.

  March 1995

  A planning outline model was distributed to all principals, K-12 in August of 1995. The committee offered to give assistance to schools on a one-time basis. (See Figure 2)

  October 1995

  The taskforce requested that copies of each school's technology planning document be sent to the department of education where they will be compiled in binders and, eventually, posted on a diocesan web page.

  May 1996

  Approximately two-thirds of the schools have completed their technology plans; 8 schools have begun the planning process.

The taskforce asks that the remaining schools complete their plans by the spring 1997.

June 1997

A letter was sent to each school that does not yet have a technology plan. In the letter, there is an offer of assistance from the taskforce. It also makes clear that there is an expectation that all schools will be finished with their plan by spring 1998.

Goal 2: The department of education will facilitate the sharing of hardware information among schools, especially the technology projects undertaken at the various school sites.

- **Strategy 1:** In the fall 1994, the technology taskforce will create a form for schools to detail a solution that was implemented on site regarding technology development, including the advantages and disadvantages of the recommended solution as well as information learned during the project or configuration.

  March 1995

  A form was created and distributed to tech coordinators at their fall meeting. (See Figure 3)

  October 1995

  For the 1995-96 school year, each technology coordinator will be asked to bring one hardware implementation form to the technology coordinators' meeting, so as to foster sharing among the schools.

  By December 1995, the names, email addresses and expertise of each technology coordinator will be collected and disseminated to all taskforce members and technology coordinators. A copy may be posted on the Diocesan home page.

  May 1996

  During the 1995-96 school year some sharing of this data happened at meetings. More frequent sharing will be a goal for the 1996-97 school year.

  All tech coordinators have been strongly encouraged to procure a personal email address. These will be collected in the fall 1996 from all tech coordinators and taskforce members.

  June 1997

  The sharing of software and hardware solutions will continue to be done informally at quarterly meetings.

  Email addresses have been collected and distributed within our system. They will not be posted on web sites due to privacy issues.

- **Strategy 2:** For the 1994-95 school year, a system will be established by which diocesan teachers can share reviews of recently purchased hardware. The process may include written reviews or participation in a conference group over a diocesan-wide network.

March 1995

When a provider is chosen in January 1996, this will be explored.

May 1996

A bulletin board, whereby diocesan technology coordinators could exchange ideas with one another, will be implemented when a diocesan-wide Internet provider is chosen. Currently, CTN is working on this project.

June 1997

It is hoped that CTN can assist in the facilitation of this strategy, using the CTN web page.

Goal 4: The department of education and individual schools will collaborate in providing information and training in the use of hardware.

- **Strategy 3:** By September 1994, the technology taskforce or a subcommittee will provide a resource list to all schools of off-site support phone numbers and resource specialists in the area of hardware maintenance and support services.

  March 1995

  The taskforce will create a list of off-site support phone numbers and resource specialists in the area of hardware maintenance and support services.

  October 1995

  By March 1996, the diocesan technology taskforce will update its resource list to all schools of off-site support phone numbers and resource specialists.

  May 1996

  The taskforce recommends that there be an annual updating of this list each fall. (See Figure 4)

  June 1997

  This list was updated as of June 1, 1997.

Goal 5: The technology taskforce will recommend to the principal of each elementary and high school, minimum standards for the acquisition of hardware for classroom and multimedia use and will publish the recommendation.

- **Strategy 1:** The technology taskforce will develop minimum technology hardware standards for classroom and multimedia use and will publish that for all elementary and high schools.

  March 1995

  A minimum technology hardware standard for future purchases of classroom equipment will be created by April 1995 and added to the appendix of the Masterplan.

  June 1997

  Completed.

- **Strategy 3:** (added October 1995) networking equipment standards for classrooms and multi-media use and will publish them for all elementary and high schools.

May 1996

The committee has updated these standards. (See Figure 5)

June 1997

Completed.

Goal 6: The technology taskforce recommends that all involved in planning, including administrators and technology resource personnel, develop a basic understanding of the technical issues related to networking.

- **Strategy 2:** By June 1995, the technology taskforce or another committee will provide to all schools a computer networks resource list containing names of network specialists and phone numbers of off-site support services.

  March 1995

  A recommendation was made to all schools to identify a network resource specialist who could be used in the planning, implementation and maintenance of the classroom or school-wide network.

  October 1995

  The technology taskforce provided the names of significant Internet providers in the area for possible adaptation for Internet access.

  May 1996

  The taskforce will continue to gather information about the Internet providers in this area and make recommendations as appropriate to the schools.

  June 1997

  Completed.

Goal 7: (added October 1995) The technology taskforce recommends that all schools in the Diocese of San Jose be networked to the Internet, providing access to teachers and students and be capable of sending and receiving email.

- **Strategy 1:** By September 1996, all schools will implement one of three options presented by the technology taskforce for Internet connectivity.

  October 1995

  The technology taskforce created a list of options for schools in providing Internet access for teacher and student use. The options range from single Internet access in one area of the school, to complete network-wide Internet access for larger schools. (See Figure 6)

  March 1996

  These options were reviewed. The committee confirms its earlier recommendation.

  Additionally, the committee was asked to make specific recommendations concerning providers. At this time, the committee does not wish to make a single recommendation; rather, the committee recommends that individual schools looking for a provider, contact the following schools for information concerning the various providers: Inernext (St. John the Baptist, Presentation HS, St. Francis HS); Telis (St. John Vianney, St. Lawrence Elementary and Middle Schools); Earth Link (Mitty HS); NetCom (Bellarmine);

Scruznet (St. Christopher). In addition, a number of schools are using individual accounts for America On-Line (AOL) and Prodigy. All elementary and some high schools are using Connect for diocesan-wide communications.

June 1997

Among the elementary schools, eleven schools have chosen Option 1, fourteen have chosen Option 3; three schools are completing plans for Internet access.

Among secondary schools, one has chosen Option 1, five have chosen Option 3.

- **Strategy 2:** By September 1996, all schools will provide email service for their head of school and technology coordinators so as to foster better communication across the Diocese.

  June 1997

  All schools have an address for head of school, most schools (31) have provided an individual address for head of school and tech coordinator.

- **Strategy 3:** By September 1996, all schools will provide a home page on the Internet with information about the school. This page can be either on-site or arrangements can be made with an off-site provider or Web site host (i.e., high schools).

  June 1997

  GoWeb was a diocesan project that created a diocesan web site (www.dsj.org) with a page for each school. This project was completed in the fall 1996. Schools were encouraged to develop their own sites. When the schools complete their site, a link is placed on the diocesan page to that site. About ten schools have developed these sites offering information to the public and curriculum applications to students and teachers.

Committee I: Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking produced a number of resources. Three of the contributions this committee made to the masterplan are described in detail here.

Planning Guide (Figure 2)

Committee I adapted the process for planning the taskforce used to create the masterplan and published it for the use of principals at the school level. Additionally, the committee offered their services to assist any principal who needed help starting the school site planning process.

Hardware Standards (Figures 3 and 5)

Each year, the committee reviews hardware standards and makes recommendations to the schools for new purchases. Clearly, schools will be able to use equipment for a number of years, but, care should be taken when purchasing new equipment to be sure that it meets current standards. It is also important to have a policy concerning what schools will accept as donations. Many schools, politely

decline contributions simply because the equipment is so outdated that it is no longer useful in the school setting or it would be too expensive to upgrade the equipment to run current software.

Networking (Figure 6)

This committee spent most of its time and energy in the area of networking and accessing the Internet. Most of the schools in the diocese are networked or in the process of network planning. Schools in the state of California were very involved in the Netday events encouraged by the federal government. Many of our schools became involved and received invaluable assistance. However, whether or not Netday events are planned in your state, the present climate for business-school partnerships is at an all-time high. Donations of time and equipment are made routinely by most computer companies. The best access to these partnerships is through parents of students in the schools. The taskforce recommended strongly that parents with business connections be put on technology taskforces at the local school sites.

Committee II: Curriculum Applications, Software Selection and Evaluation

Goal 1: The taskforce will determine the most effective and efficient means of compiling and disseminating software evaluations done by professional educators.

October 1995

The committee is considering the relevance of this goal in light of the proliferation of software evaluations being done by all professional groups and magazines.

- **Strategy 1:** The taskforce will review and research sources such as *The CUE Newsletter*, and the *Apple K-12 Curriculum Software Reference*, as well as other technology magazines and catalogues, and develop a plan for dissemination of this information during the 1994-95 school year.

  March 1995

  Tech coordinators will make a list of magazines and memberships subscribed to by schools. Hard copies and/or posting to a bulletin board will be done when available.

  October 1995

  The MECC coordinator will distribute annually, an updated list of Diocesan-licensed software.

  May 1996

  The taskforce recommends that each school check Internet sites and professional literature for software evaluations. The taskforce will annually update and email to all schools a list of Macintosh software District site licenses. (See Figure 7)

  June 1997

  The list of outstanding Language Arts Software being used in the

schools is included in the *Masterplan.*

The California Instructional Technology Clearinghouse has launched a web site which contains full evaluation information on more than 2000 instructional video and interactive technology resource programs. Schools are encouraged to search the full ITC Online database at http://tic.stan-co.k12.ca.us.

- **Strategy 2:** A committee will research and review software produced by textbook companies for use with their texts; such review will be done during the appropriate year of adoption.

  March 1995

  Curriculum coordinators are piloting math texts this year in nine schools. Textbook committees will review this.

  October 1995

  Seven Mathkeys inservices on three strands (Whole Numbers, Probability and Geometry—K-6) were provided by the department of education for two teachers and the tech coordinator from each school during 1995-96.

  May 1996

  A taskforce has been created to set-up inservices by grade level and strand to train all K-6 math teachers during the 1996-97 school year.

  A sub-committee will be established to review and recommend software produced and/or endorsed by textbook companies for use with their texts. This sub-committee will include: one teacher from each school and a total of two or more technology coordinators. The teachers chosen for this committee should be using technology on a regular basis, integrating it across the curriculum. Teachers chosen will be from a variety of grade levels. This sub-committee will work in conjunction with the curriculum committee and the textbook selection committee. Before final recommendation(s) of software, every school will have a copy of the software for an adequate length of time for evaluation and feedback to the sub-committee.

  June 1997

  The diocesan curriculum coordinator in conjunction with the curriculum task force will evaluate software concurrent with the subject area being taught. This committee will evaluate only materials provided by the textbook publishers.

- **Strategy 3:** The taskforce will discuss the need for additional reviewing and evaluating software for instruction, teacher support, administration and special applications.

  March 1995

  Once the diocese decides on a provider, a bulletin board will be set up consisting of three parts: read only, interactive and chatting. Someone should be hired to administer the bulletin board. Once in

place, Tech Coordinators will be encouraged to post information on a monthly basis.

October 1995

Since schools will be using different providers, this strategy will not be implemented at this time. It may be revisited (if/when) all schools are using the same provider.

May 1996

Because of the unique software needs of each school, the taskforce recommends that guidelines be used to evaluate software. Software Evaluation Guidelines will be available by August 1996.
(NOTE: Once the Software Evaluation Guidelines are completed, we will write a brief outline for the main body of the Masterplan and will include a detailed guide for inclusion as an appendix.)

CTN is working on an electronic Teacher Bulletin Board. This board will be run and monitored by CTN and will be accessible to teachers in the Oakland, San Francisco, and San Jose by September 1996.

June 1997

This strategy has been incorporated into Strategy #2.

Goal 2: The taskforce will develop creative ways to involve teachers in the planning of technology integration into specific areas of the curriculum.

- **Strategy 2:** The taskforce will consider creating curriculum development/tech integration teams to work on units (math in 1994-95; science and social studies in 1995-96).

March 1995

For Elementary: As textbooks are being reviewed, a careful review of the software will be done. The department of education will give inservice on this software.

Curriculum coordinators and tech coordinators will make the sharing of creative teaching units part of their regular meetings.
For Secondary: If any school or principal is going to pay a committee to do any work on technology units, we recommend that the committee be open to all secondary teachers in the diocese.

October 1995

Science and social studies units will not be done in 1996-97. Teams of teachers who attended the MathKeys workshops will train teachers at their local sites.

May 1996

On-going MathKeys training for all K-6 math teachers will be conducted in school year 1996-97.

The taskforce recommends that principals consider paying a teacher(s) to participate on a team to develop curricular-based units, which integrate technology. The department of education will coordinate the formation of these teams. Primary focus of these teams will be the adoption subject; however, other subject areas should be addressed as well.

June 1997

Approximately 40 teachers, elementary and secondary, will attend a two week summer institute on the integration of the Internet into the curriculum.

- **Strategy 3:** Once models of integration are developed by these select teams, the taskforce will determine the best way to disseminate the information and train other teachers in the diocese.

  March 1995

  This will be done on an as needed basis.

  May 1996

  The teams developing the units will make the units available via email, snail-mail, and a copy will be kept on file at the department of education. Training will be done on an as needed basis.

  June 1997

  Projects done be teachers during the Summer Tech Institute will be shared with all schools during 1997-98.

- **Strategy 4:** The taskforce will convene a telecommunications committee to explore and disseminate information regarding the use of the Internet and other on-line resources appropriate in an educational setting.

  March 1995

  Committee I has taken care of this strategy.

  June 1997

  CTN has assumed this strategy and accomplishes the strategy, in part, through its web site(www.ctnba.org).

Goal 3: (Added May 1996) The taskforce recommends that teachers use the Internet to enhance the curriculum.

- **Strategy 1:** The taskforce will coordinate with CTN to ensure classes are being offered that are meeting the needs of teachers in the diocese.

  May 1996

  CTN will continue to offer classes in the 1996-97 school year at the Santa Clara County Office of Education as well as at individual schools by request. The taskforce recommends that principals allow teachers to attend these classes. The taskforce additionally recommends that principals give these same teachers release time on a regular basis to train other teachers in the school.

  June 1997

  CTN continued to offer classes throughout 1996-97 and has plans for additional courses/workshops during 1997-98.

- **Strategy 2:** The taskforce will research the best way to disseminate successful/good projects and lesson plans found on the Internet.

  June 1997

  Individual school web sites and the CTN web site are listing links to teacher resources on the Internet including lesson plans.

The work of Committee II: Curriculum Applications, Software Selection and Evaluation standards touched on issues other than curriculum applications and hardware/software guidelines. These overlapping issues included staff development; the CTN, Internet training and Internet/www opportunities; selection and evaluation of software; and determining district and site licenses.

Staff Development

There is probably no more important topic than that of staff development. Many experts believe that at least one third of the technology budget should be directed toward the development of the staff. The masterplan recommended two major areas of staff development: the Internet and curriculum integration. Committee II made a number of recommendations concerning the frequency of inservice education for teachers. Over the past three years, the department of education has offered one inservice per month to assist teachers with the integration of technology into the curriculum, CTN has offered one workshop per month on Internet related topics, principals have given regular release time and brought various types of training to the faculties during scheduled meeting time. The importance of a sequential, regular program of staff development workshops cannot be emphasized too much!

District Licensing

Procuring software licenses as a district is an effective way of saving a considerable amount of money for individual schools, it also offers the potential of offering staff development on specific pieces of software. (See Figure 7 for additional information on this topic.) Microsoft and Claris Select Buys are worth noting in particular. These companies offer their best prices to schools who are part of an educational consortium. If you are unable to set up these buys at the diocesan level, check with your county office of education.

Committee III: Staff Development, Recommendations for Teacher and Student Competencies

Goal 1: The taskforce recommends that all teachers stay informed about current computer/technology trends in education by participating regularly in training and inservice programs.

- **Strategy 5:** The taskforce encourages all to seek personal growth in computer/technology competency by participating in classes and workshops offered by local universities, the County Office of Education, the Institute of Computer Technology, the Tech Museum, computer stores, vendors, and by attending professional conferences such as the Computer Using Educators and MECC Conferences.

  March 1995

  The department of education will collect and distribute summer inservice opportunities to the principals at their May meeting. The department will also sponsor workshops during the summer.

  October 1995

  The department accomplished the above goal and continues to encourage participation in diocesan inservices as well as inservices,

meetings, etc., by outside groups. A number of Applecore sessions were offered in the late summer and are scheduled for this year.

June 1997

Completed and ongoing.

Goal 2: The taskforce recommends that principals offer training/inservice incentives and makes the following recommendations to the school site administration.

- **Strategy 1:** The principal of each school needs to require that each teacher have a technology goal as one of his/her yearly goals in the professional growth plan.
- **Strategy 2:** The evaluation of teachers and principals will include a technology component.
- **Strategy 3:** The principal will send at least one representative to a local technology workshop/convention annually.
- **Strategy 4:** The principal will provide release time to allow teachers to view technology at another school.
- **Strategy 5:** The principal will consider other incentives such as the following: contract renewal requirement, professional growth credit, release time, summer loan computers, access to materials for use in the classroom or office, stipends for hours spent in specific training.

October 1995

The principals are working on these strategies. Encouragement is given to and input is gathered from the principals at their monthly meetings.

May 1996

More specific details on each of these strategies are given in the Principals' Report.

June 1996/June 1997

Twenty principals offered incentives to teachers attending technology inservices. These incentives ranged from paying stipends to release time, to allowing teachers to take home school computers and other materials.

Goal 3: All those teaching in the diocese should be able to do the following by the end of the 1994-95 school year:

- Demonstrate basic keyboarding skills
- Select and use appropriate software in teaching
- Access and use a network
- Use a database and/or spreadsheet for inventories, budgets, student records, rosters, etc., as needed

October 1995

TEACHER COMPETENCY GOALS 1996-97 (First Draft)

GOAL 1: Demonstrate basic word processing skills

A. Create a parent newsletter
B. Create a teacher made worksheet/test
C. Save a file on a diskette and/or file server
D. Send files electronically when appropriate

GOAL 2: Select and use appropriate software when teaching

A. Include appropriate software as part of regular lesson plans (e.g., Mathkeys)
B. Use computer for teacher demonstration and as a student workstation
C. Work with Technology Coordinator to integrate lesson plans with lab activities

GOAL 3: Accesses and uses a network

A. Knows the difference between internal and Internet email
B. Can access World Wide Web and use search tools (e.g.,Yahoo, ERIC, MacWeb)
C. Understands the appropriate use of the Internet
D. Participates in CTN Electronic Field Trips as appropriate

GOAL 4: Uses a database and/or spreadsheet for inventories, budgets, student records, etc., as needed

GOAL 5: Is familiar with available grading software and uses it when appropriate

May 1996

TEACHER COMPETENCY GOALS 1997-98 —revised from October 1995—(See Figure 8)

These goals are divided into several phases. Phase 1 goals are considered to be basic and should be attained by all teachers in grades K-12. Phase II goals are more intermediate in nature and allow for each school to select the technology area or areas they are concentrating on for the year. Phase III and IV goals allow for a further expansion of skills by teachers.

June 1997

Twenty-three principals reported that teachers had met competency requirements. Some note that more assistance is needed in the use of the database and/or spreadsheet.

Committee III of the tech task force is creating a Teacher Assessment Form. In 1997-98 they will complete and implement the following process for teacher self-assessment.

1. Design a general rubric;
2. Distribute form to schools; require teachers to complete form;
3. Require that teachers fill out form in October and May for file;
4. Send final copies to diocesan office in October;
5. Have tech coordinators review forms in order to plan inservices.

Goal 4: Schools will implement extensive hands-on computer/technology experience for all students assuring that students attain skills and hardware/software competencies at specific intervals. The taskforce will establish specific recommendations for grade level proficiencies in the 1994-95 school year for implementation in 1995-96.

May 1996

This has been completed. (See Figure 9)

June 1997

Teacher Assessment Form

1. Design a general rubric
2. Distribute to schools; teachers complete form
3. Teachers fill out in October and May for file
4. Have final copy sent to Diocesan office in October
5. Tech coordinators review forms to plan inservices

Teacher Competencies/Recognition & Elementary Student Competencies

It was the belief of the taskforce that both teachers and students need to spend significant time in learning how to use technology to enhance student learning. In order to achieve this, the taskforce developed competencies to be mastered by teachers and students. These competencies are listed in Figures 8 and 9.

Staff Development: Contractual Requirements and Other Incentives

The taskforce recognized that incentives needed to be offered in order that teachers would take advantage of the numerous inservices provided for them. The taskforce went on to suggest the types of incentives that might encourage teachers to improve their technology skills.

If dioceses or schools have annual professional growth requirements, a percentage of that requirement can be devoted to technology training. In the state of California, renewal of credentials is contingent upon 150 hours of professional updating every five years. Our diocese has a similar program stating that teachers must complete thirty hours a year in professional improvement. Schools can require that some of these hours be spent in technology training, often offered on campus.

The support of the superintendent and/or boards is crucial in successfully implementing this plan. One way that this support can be expressed is through the contracts offered to teachers. Perhaps, offering contracts that require that teachers possess technology skills upon hiring and that they continue to improve their skills as a condition for renewal of contract. Principals, then, can require that teachers develop technology goals as part of their annual goal-setting and evaluate these goals during supervision and at the time of annual evaluation.

Encouraging teachers to visit other schools and other teachers during school time, allowing teachers to take home school equipment on weekends and during vacations, giving release time to attend workshops and training are additional incentives to assist teachers in getting the necessary training.

The taskforce has recommended that the superintendent's office assist in holding teachers accountable for the mastery of the competencies developed. Two years ago, the diocese developed a process for testing teachers' skills and issuing certificates of accomplishment for those who successfully demonstrated the appropriate skills. Those who did not demonstrate competency, were required to submit an action plan detailing how and when the skills would be mastered. During 1997-98, the taskforce will develop a self-assessment for the new competencies being re-

quired. The time and effort used to work through this issue will be rewarded with a teaching force growing professionally in technology skills which in turn enhance teaching and learning.

Committee IV: Administrative Uses, Funding, Security, Maintenance, Ethical Uses

Goal 1: The taskforce recommends that principals analyze the ways technology can streamline and improve the quality and quantity of the work of the school for teachers and administrators including reports, newsletters, financial bookkeeping and reporting and, to accomplish this goal, makes the following recommendations:

- **Strategy 2:** The taskforce will assemble recommendations of model packages for administrative use, including recommending that all administrative bookkeeping and recordkeeping be computerized in the 1994-95 school year.

  March 1995

  This is in progress. It will be completed during the 1995-96 school year.

  May 1996

  This will be a focus of the committee during the 1996-97 school year.

  June 1997

  a. **Rewrite the goal to include identification of administrative functions which must be served by technology solutions i.e. software, hardware integration.**
  b. **Identify which software packages are in use in the diocese by which schools through an updated survey —focus on strengths, weaknesses, program costs, learning curve needed to get up to speed**
  c. **Make 3 levels of recommendations for administrative packages and develop a timeline for implementation**

Administrative Functions Identification—a brief list (draft only)

Program Title	Strengths	Weaknesses	Cost
Attendance/Recordkeeping			
Grades			
Health Records			
Report Cards			
Progress Reports			
Emergency Cards			
Transcripts			
Scrip Program			
Counseling			
Discipline Records			

Training time needed to use this system?
Who at your school uses this system?

d. **At this time the task force is unable to make a recommendation. Investigation will continue through the summer. Three software packages were investigated this year: *MacSchool*, Apple; *ReportCardMaster*, Heliocentric Software; *School Solutions*, Toland.**

All programs are based on FileMaker Pro. St. Frances Cabrini is piloting school Solutions; St. Leo's is in process of setting up a pilot program.

Goal 2: The technology taskforce recommends that all users sign an ethical technology use agreement, which the taskforce will develop during the 1994-95 school year, including the following topics:

- Adherence to license agreements
- Restriction of use of privately-owned hardware and software
- Safeguards against computer viruses
- Purchase of computer-related supplies
- Security measures: maintenance of confidentiality
- School ownership of information
- Safeguarding of data
- Storage of data, etc.

- **Strategy 1:** Technology users, e.g., staff, volunteers and students, will sign an ethical agreement before gaining access to the system.

  March 1995

  A draft has been completed. It will be checked by a lawyer in May and distributed in August. Further work will be done in the fall meeting.

  October 1995

  The committee is in the process of reviewing and editing the document. The document should be completed prior to the March 1996 meeting.

  May 1996

  The document is completed and will be distributed in August 1996. (See Figure 10)

  June 1997

  Sixteen schools have agreements in place. 12 schools have not yet implemented this strategy.

  We remind principals that copies of the agreement are in the Appendix of the Masterplan. We recommend that it be included in next year's school handbooks as reference and that each user of technology be given a copy to sign and return to school at the beginning of this next school year.

Goal 3: The taskforce recommends that principals provide adequate security for stand alone and networked technology. This includes the storage of documents, data, hardware and software.

March 1995

This will also be studied via the school questionnaire. Results will be shared.

May 1996

This goal is on the committee's agenda for 1996-97

June 1997

Goal#3 transferred to Committee 1

Goal 4: The taskforce recommends that principals obtain the services of trained personnel to maintain equipment. There are generally two or three levels of support needed: onsite, contracted services and expert advice.

- **Strategy 2:** The taskforce will gather proposals and bids for diocesan-wide contracted technology maintenance and support at the second level by June 1995.

March 1995

CTN and the department of education are preparing a proposal. Bids will be sought and a recommendation made to the principals in the August 1995 meeting.

October 1995/May 1996

CTN is preparing a report listing the services they can make to the schools.

June 1997

CTN has published a list of services available to the schools.

Additionally, to address basic onsite technical support routines for schools handling their own technical support functions internally, with paid or volunteer help, we recommend using and/or modifying this brief list of maintenance tasks on a periodic basis.

Technical Support Help

We recommend that regular, monthly technical support tasks could be completed as part of family service hours when there is a firm commitment from parents to do the job regularly.

Location of Computers

Remove computers in classrooms from direct proximity to chalkboards, chalkdust areas. Some schools have implemented use of "white boards" in areas close to computer workstations. Cover computers if not used during the summer.

Periodic Maintenance Tasks

Weekly

Dust computers
Clean screens
Wipe down tabletops or workstations
Backup data files
Maintain hard disk (Norton Util, Now Util or PcTools etc.)
Check surge protectors for blown fuses; replace if blown

Monthly

Rebuild Macintosh desktops
Backup in rotation
Clean mouse
Clean keyboard

6 Months

Open the computer case and blow it out—using canned air, or Compu-Vac

Vaccum dot matrix printers

Blow out laser printers with canned air

Annually

Clean CD ROM drives with cleaning kit

Clean floppy drives with cleaning kit

Clean laser printers with laser cleaning sheets—commercial kits run about $15

Model Administrative Packages

Committee IV is currently working on administrative software pilots. A number of schools are using different programs for attendance, progress reports and report cards. It is the hope of the committee that a recommendation of a program can be made in Spring, 1997. At that time, a diocesan license will be sought for the program and schools will be invited to adopt the program. Since most of the high schools already have programs implemented, the program will probably be designed for the elementary schools only.

Ethical Use Statement/Agreement

Committee IV developed the Technology Rules and Codes of Ethics and the Ethical Use Agreement. (Figures 10 and 11) This agreement was designed to be signed by students, parents and teachers. It is the belief of the taskforce that teachers and students need to discover the riches contained on the Internet for classroom use and for research.

Though there are dangers and inappropriate material on the internet, the taskforce believes that effective education of students beginning in kindergarten on the ethical use of this valuable resource will greatly limit the dangers. It is hoped that frequent discussions of the points made in the Technology Use Agreement with students and the signing of this Agreement will help limit the waste of time and improper use of the Internet and the Web.

FIGURE 2
Planning Guide

Developing A Technology Plan

I. Getting Organized
   a. Create a planning group: include administrators, teachers, knowledgeable and interested parents and computer resource people
   b. Write a mission statement: define the purpose of the group and its tasks
   c. Form working committees: define the areas of study, e.g., hardware, facilities preparation, selection/evaluation of software, curriculum applications, inservice needs, teacher and student competencies, administrative uses, maintenance, security, funding.

II. Gathering Information
   a. Inventory current hardware, software
   b. Interview teachers, students, parents about current use, proposed uses
   c. Visit other similar institutions who are integrating technology into the curriculum
   d. Gather information from professional and community sources, e.g., CUE, ICUE, industry personnel, the County Office of Education, etc.
   e. Analyze the data and create a list of priorities.

III. Developing the Plan
   a. Develop goal statements in committees for each of the areas of concern
   b. Write objectives and strategies for each Goal: what will be done, when it will be done, who will do it, etc.
   c. Share the draft plan with a group of faculty, parents, board.
   d. Revise the plan

IV. Implementing the plan
   a. Identify community resources
   b. Develop a budget, including funding sources
   c. Present plan to pastor, parents, faculty, etc.

V. Monitoring and evaluating the plan
   a. Create a follow-up committee and procedure for monitoring the accomplishments of the Goals and strategies twice a year
   b. Make adjustments as appropriate

FIGURE 3
Hardware Evaluation Form

Date:_____

School:_____Phone:_____

Name of Person Completing the Form:_____

We recently purchased a

_____

for _____dollars from_____store)

located at_____
(address or phone number).

The salesperson's name was:_____

The advantages of this product are:

_____

_____

_____

_____

The disadvantages of this product are:

_____

_____

_____

_____

In the process of buying and using this product, we learned the following, which will help other schools in their decision-making process:

_____

_____

_____

_____We recommend that other diocesan schools buy this product.

_____We would not recommend that other diocesan schools buy this product.

FIGURE 4
Resources for Teachers

Software/Hardware/Vendors	*Phone Number*
Broderbund	800-521-6263
Computer Plus	800-446-3713
Davidson	800-545-7677
Educational Resources	800-624-2926
EISI	800-955-5570
Peter Rafanan	415-969-5212
Intellimation	800-346-8355
Learning Co.	800-852-2255
Learning Services	800-877-9378
	415-969-0544, x 320
MacConnection	800-800-2222
Microsoft	206-882-8080
Scholastic	800-541-5513
Southwestern	800-543-7972
Sunburst/Wings for Learning	800-321-7511
Tom Snyder	800-342-0236
WordPerfect	800-225-500

Cd-Roms/Laserdiscs	*Phone Number*
Britanica	800-554-9862
Bureau of Electronic Publishing	800-828-4766
Coronet	800-777-8100
Educorp	800-843-9497
National Geographic	800-368-2728
Optical Data	800-524-2481
Pioneer	213-835-6177
Reading & Computing Place	714-523-9000
Software Toolworks	800-234-3088
Tiger Software	800-888-4437
Video Discovery	800-548-3472
Voyager	310-451-1383

Communications	*Phone Number*
America OnLine	408-297-8495
(Mercury Center)	
Distribution Center, Ste. 200	
8619 Westwood Center Dr.	
Vienna, Va 22182	
Classmate Knowledge	800-334-2564
Index/Dialog Information Services, Inc.	
3460 Hillview Avenue	
Palo Alto, CA 94304	

CONNECT
Don Madsen — 800-973-0110, x328

CSUNET (CORE) — 800-924-1054
California Online Resources for Teachers
San Jose Campus

San Francisco State Campus — 408-333-1077
Hayward Campus — 510-727-1841

Publications/Organizations — ***Phone Numbers***

Computer Using Educators (CUE)
1210 Marina Village Parkway
Suite 100 — 510-814-6630
Alameda, CA 94501

Informal Computer Using Educators (I-CUE) — 408-338-7842
An affiliate of CUE
13652 Big Basin Way
Boulder Creek, CA 95006

Electronic Learning
(Published by Scholastic)
Electronic Learning
P.O. Box 3797
Boulder, Co 80322-3797

International Society for Technology in Education — 503-346-4414
(Also publishes The Computing Teacher and Microsoft Works in Education)
1787 Agate Street
Eugene, Or 94703-1923

MacUser — 800-627-2247
P.O. Box 56986
Boulder, CO 80322-6986

MacWorld — 800-288-6848
P.O. Box 54529
Boulder CO 80322-4529

T.H.E. Journal (free) — 714-730-3739 (FAX)
(Technological Horizons in Education)
Circulation Department
150 El Camino Real, Ste. 112
Tustin, Ca 92680-3670

FIGURE 5
Minimum Technology Standards for Hardware

1. The technology taskforce recommends the following as minimum standards for the quantity and configuration of new hardware acquisitions for 1996-97. For the year 2000, the State of California has set a goal of one computer for every four students. This is a good goal for us as well.

2. A minimal technology solution for computer peripherals follows:
   a. at least one Pioneer Laserdisc Player Model 2400 or the equivalent and laserdiscs to support the curriculum

   b. an inkjet printer the equivalent of a Hewlett Packard Deskwriter or Deskwriter (the color solution) or an Apple Laserwriter Select 300 or equivalent

   c. at least one CD-ROM player per grade level cluster in the elementary schools (primary, intermediate and junior high) and appropriate CD-ROM disks

   d. at least one 28.8 baud modem for faculty and one for student use

3. With the rapid improvement in hardware, the taskforce recommends that the principal or technology coordinator stays current by reading and attending hardware exhibits, etc. For 1996-97, the taskforce recommends the following minimum standards for new purchases:
   a. the recommended solution for elementary schools is the purchase of Power Mac computers that have 16mg RAM and a 500 mg hard drive.

   b. since the high schools have both IBM and MAC systems, there are minimum recommendations for each. For IBM users it should be a Pentium microprocessor, with 16 mg RAM, SVGA monitor, 500 mg hard drive with DOS 6.3 and Windows 3.1 or 95. The recommendation for MAC users is the same as for the elementary schools.

   c. a quad-speed CD or equivalent is recommended for new CS players

   d. for Apple users, it is recommended that a Deskwriter C or a Laserwriter 300 series printer be purchased. For high volume usage an Apple Laserwriter 16\600 is recommended. For IBM users, a Deskjet or Laserjet III is recommended. For high volume usage a Laserjet is recommended.

FIGURE 6
Internet Access Options

Option 1:

Schools that have no network in place or a limited network should contract with a local service provider (i.e., America On-Line) to provide at least one computer with access to the Internet. Two or three accounts would be preferable, with one workstation in the teachers' room and another available for students.

Option 2:

Schools that have a building or campus network in place should consider connecting the school's file server with an on-line service. Through the use of a network modem or modems, the school can contract with a private provider (i.e., America On-Line), or a direct Internet provider (Internex-Tiara, Aimnet, BarNet, etc.) and then distribute access to all computers on the network. This would provide faculty and students with some Internet capability (limited only by the number of modem connections).

Option 3:

Schools that have a larger network in place should consider purchasing an ISDN line/router and connect that to its existing network. By using a commercial Internet provider (Internex-Tiara, Aimnet, BarNet, etc.), the school would then be able to provide access to all computers on the network and have 25-50 users concurrently using the World Wide Web. A more limited option for five concurrent users is also available using ISDN, a router and a service such as a university or city network.

Internet and Connectivity Goals

By January 1, 1996, all elementary, junior high and high schools should have:

1. at least one computer connected to an on-line service with email, Internet connectivity and World Wide Web access
2. an email address for the head of each school, either through a public provider or directly through the Internet
3. an on-site person to collect email addresses of other heads of schools and form groups for diocesan-wide broadcasts
4. a home page created with text and/or graphics
5. a school site plan using the diocesan masterplan as a model

FIGURE 7
District Licensing Agreements

1996-97 District Software Site Licenses

- MECC
- BodyScope
- DinoPark Tycoon
- Storybook Weaver
- Super Munchers
- Tesselmania
- U.S.A. Geograph
- Houghton-Mifflin/MECC (Math Software for Grades K-6)
- MathKeys Whole Numbers Vol. I
- MathKeys Whole Numbers Vol. II
- MathKeys Probability Vol. I
- MathKeys Probability Vol. II
- MathKeys Geometry Vol. I
- MathKeys Geometry Vol. II

Microsoft Select/Claris Buys (Through the Santa Clara County Consortium, schools are able to purchase software at the lowest prices.)

FIGURE 8
Teacher Competencies

Teacher Competency Goals 1996-97

These goals are divided into several phases. Phase 1 goals are considered to be basic and should be attained by all teachers in grades K-12. Phase II goals are more intermediate in nature and allow for each school to select the technology area or areas they are concentrating on for the year. Phase III and IV goals allow for a further expansion of skills by teachers.

Phase I: Basic Skills Attainment

Goal 1: Demonstrates Basic Word Processing Skills

- Creates a memo, knows how to include graphics
- Uses a computer to create a worksheet or test
- Saves a file on a diskette and/or file server
- Can edit a file as needed

Goal 2: Selects and Uses Appropriate Technology When Teaching—includes appropriate software as part of regular lesson plans (e.g., MathKeys)

- Computer is used for teacher demonstrations, and as a student workstation
- Works with technology coordinator to integrate lesson plans with lab activities
- Uses available multimedia equipment including:
  VCR and tapes
  LCD panel or large display monitor
  CD-ROM's

Goal 3: Uses Available Grading Software on A Regular Basis

Phase II: Intermediate Skills Attainment (select the goals as appropriate for your school)

Goal 4: Accesses and Uses A Network

- Can successfully use email (internal and/or Internet)
- Creates and replies to messages
- Can delete messages
- Knows how to use the Help command
- Knows how to make a group mailing

Goal 5: Uses the Internet

- Can access the World Wide Web and use search tools (e.g., Yahoo, ERIC, WebCrawler, NASA)
- Understands appropriate use of the Internet
- Participates in CTN Electronic Field Trips as appropriate

Goal 6: Uses Some Multimedia Hardware, such as

- Laser disc player
- Video camera
- Digital camera
- Scanner
- Computer
- MIDI keyboard
- Microphone for recording sound

Phase III: Advanced Skills Attainment

Goal 7: Uses the Internet Regularly and Can

- Save graphics from the Internet
- Transfer text from a Web site to word processing
- Print a Web page
- Identify the difference in types of sites available (collaborative, search, publication)
- Use bookmarks (if available)

Goal 8: Engages In Multimedia Production

- Integrates motion, sound, and graphics
- Performs video capturing and editing
- Hooks up camera, VCR, and computer
- Understands Hypertext presentation styles (tutorials vs. reports) and when each should be used

Phase IV: Future Goals

Goal 9: To Share Developed Projects and Tools Via:

- Web pages
- Computer-based presentations
- Video conferences

FIGURE 9
Student Competencies by Grade Level

1st - 3rd Grades

By the completion of the 3rd grade students will have developed the following computer skills.

1) Computer operations:
   - understands basic computer terminology such as pull down, drag, save, desk-top, diskette, etc.
   - knows how to turn the computer on and off correctly
   - knows how to use the mouse correctly (understand single vs. double-clicking, and pointing.)
   - knows the basic keyboard command keys such as Delete, the purpose of the Shift key, Command key, Caps Lock key, Return key
   - is beginning to become familiar with the keyboard layout—where specific keys are located
   - knows how to create upper case lettering
   - knows the difference between a folder and a file
   - knows how to open an existing file
   - knows how to create a new file
   - knows how to send a file to a printer
   - is able to complete the steps to save a file onto a hard disk and a diskette

2) Hardware:
   - knows how to insert a diskette
   - knows how to format a diskette
   - knows how the Chooser works on a Macintosh
   - knows how to turn a printer on
   - knows how to handle, turn on, access, and eject a CD

3) Software:
   - knows the basic commands for several software programs (e.g. Kid Pix, Kids Works)
   - knows in general what type of commands are contained under the File, Edit, and Windows menus
   - knows how to Cut, Copy, and Paste
   - knows how to spell check a document
   - knows how to Bold, Underline, and Italicize text
   - knows how to change a font size and type
   - knows how to use 2 different word processing programs

4) Simulations, Games, Drills:
   - is able to follow screen directions in a game
   - is able to work cooperatively with other students

4th - 6th Grades

By the completion of the 6th grade students will have mastered skills outlined for 1st-3rd grades, and developed the following computer skills.

1) Computer Operations:
   - is able to follow the commands to complete a task as given by the teacher
   - knows how to import a CD picture into a document
   - knows how to use the built in calculator
   - knows how to access the Control Panel when asked to change monitor features, the sound level, and memory in a Macintosh
   - knows how to identify and solve print monitor errors
   - knows how to clean and care for a mouse
   - has correct keyboarding skills with minimum speed

2) Hardware:
   - is able to perform simple adjustments in the control panel
   - knows how to select a printer within the Chooser
   - can perform simple problem solving techniques (i.e., check cables)

3) Software:
   - knows some keyboard shortcuts
   - knows how to find a file
   - knows how to use the Search and Replace functions in word processing
   - knows proper finger placement on a keyboard
   - is increasing keyboarding speed and accuracy
   - knows how to create a simple budget in a spreadsheet
   - knows how to create 3 kinds of graphs
   - knows how to create a database
   - knows how to merge a database into a letter (Works)
   - is able to problem solve, use critical thinking if they are "stuck"
   - knows how to use virus protection software

4) Scanners and CD's:
   - can use CD's (encyclopedia and atlas's) for class research projects
   - is able to scan a picture and place it in a document

5) Telecommunications: (future)
   - understands acceptable use of email and the Internet
   - is able to connect on-line

7th - 8th Grades

By the completion of the 8th grade students will have mastered the skills outlined for the 1st -6th grades, and developed the following skills.

1) Computer Operations:
   - knows how to change cables, connections, and solve simple error messages
   - can load paper and cartridges into a printer

2) Software:
   - knows how to create an outline with appropriate use of tabs
   - knows how to format a report
   - can insert clip art
   - can utilize sorting and extracting functions when working with databases
   - can create a basic multimedia presentation
   - can design and create a curriculum based project displaying a high level of technology
   - demonstrates an ability to choose the appropriate software when given an assignment
   - can use a Scanner
   - can create a Bibliography, Footer, Header, Footnotes, and Endnotes
   - can use the Thesaurus, Grammar Checker features in word processing

3) Telecommunications:
   - explores and integrates the Internet
   - knows the difference between in-house email and Internet email
   - can access World Wide Web and use search tools
   - knows how to use the Internet to research a subject (e.g. Gopher)
   - learns to connect to Home Pages on the WWW
   - learns how to create a posting to a Usenet group
   - understands what constitutes appropriate use of the Internet
   - knows how to use email: compose, send, reply, delete, and forward messages

FIGURE 10
Rules and Code of Ethics

Diocese of San Jose Technology Users

As a computer user, I agree to follow the rules and code of ethics in all of my work with computers while attending _____.

1. I recognize that all computer users have the same right to use the equipment; therefore I will not use the computer resources for non-academic purposes. I will not waste or take supplies such as paper, printer ribbons, and diskettes that are provided by the school. When I am in the computer lab, I will talk softly and work in ways that will not disturb other users. I will keep my computer work area clean and will not eat or drink in the computer lab.

2. I recognize that software is protected by copyright laws; therefore, I will not make unauthorized copies of software and I will not give, lend, or sell copies of software to others. I understand I will not be allowed to bring software applications, games, or CD-ROMs from home to be used on school equipment without proof of licensure and prior approval of appropriate school personnel.

3. I recognize that the work of all users is valuable; therefore, I will protect the privacy of others by not trying to learn their password; I will not copy, change, read, or use files from another user without prior permission from that user; I will not attempt to gain unauthorized access to system programs or computer equipment; I will not use computer systems to disturb or harass other computer users or use inappropriate language in my communications.

   I will honor my school's procedures for the storage of information. I understand that I am expected to save files that I want to keep on my own floppy disk. I realize that, after prior notice has been given to me, files may be deleted from the system to protect the integrity of the network or because of space limitations on the computer's hard drive.

4. Each student who receives Internet access through an account will be instructed in the proper use of the network. The use of the Internet must be in support of education and research consistent with the educational objectives of the school. Students using network or computing resources must comply with the appropriate rules for that network or resource.

   As a user of a network, I will not use bulletin boards nor chat lines for personal use. In addition, I will not reveal my personal information, home address or personal phone number or those of students, teachers or other staff members. Transmission of any material in violation of any U.S. or state regulation is prohibited. This includes, but is not limited to: copyrighted material, threatening or obscene material, or material protected by trade secret. The use of school computers and networking resources for commercial activities is not permitted. Their use for product advertisement or political lobbying is also prohibited.

5. Parents must realize that their students may encounter material on a network/bulletin boards that they do not consider appropriate (vulgar jokes, statements of belief that some might consider immoral, etc.). The student is responsible

for not pursuing material that could be considered offensive.

6. The use of the computer is a privilege, not a right, and inappropriate use will result in the cancellation of these privileges. Vandalism or intentional modification of system settings will result in cancellation of privileges and/or school disciplinary action. The school reserves the right to seek financial restitution for any damage caused by a student or other user. The system administrators will deem what is inappropriate use, and their decision is final. The system administrators may close an account at any time as required. The administration, faculty, and staff of the school may request the system administrator to deny, revoke, or suspend specific user privileges. Violations of the rules and code of ethics described above will be dealt with seriously. Violators are subject to loss of computer privileges.

FIGURE 11
Technology Use Agreement

Diocese of San Jose

Sponsoring Teacher
I have read the technology use agreement and agree to promote this agreement with the student. Because the student may use the network for individual work or in the context of another class, I cannot be held responsible for the student use of the network. As the sponsoring teacher, I do agree to instruct the student on acceptable use of the network and proper network etiquette.

Teacher's name (please print): _____

Signature: _____ Date: _____

User
I understand and will abide by the technology use agreement. I further understand that any violation of these regulations is unethical and may constitute a criminal offense. Should I commit any violation, my access privileges may be revoked, school disciplinary action may be taken, and/or appropriate legal action initiated.

User's name (please print): _____

User Signature: _____ Date: _____

(If you are under the age of 18, a parent or guardian must also read and sign this agreement.)

As the parent or guardian of this student, I have read the technology use agreement. I understand that this access is designed for educational purposes. I am aware that it is impossible for the school to restrict access to all controversial materials and I will not hold them responsible for materials acquired in use. Further, I accept full responsibility for supervision if and when my child's use of school's technology resources is not in a school setting. I hereby give permission for my child to use the school's technology resources and certify that I have reviewed this information with my child.

Parent's or guardian's name (please print): _____

Signature: _____ Date: _____

Chapter Four:

THE PRINCIPAL'S WORK

The principal is the key to integrating technology into the curriculum of the school. While recognizing that help from community leaders—consultants, taskforces, the business community, parents—is necessary, the principal must be willing to assume the leadership position in this venture. The two tasks that demand the principal's leadership are to articulate the vision and find funding. These tasks cannot be delegated. The principal needs to be able to articulate the vision and elicit strong support from all segments of the school community when it comes to the significant issues of hardware acquisition, networking, software selection and evaluation, staff development, teacher and student competencies, ethical use, security, maintenance and funding. The principal needs to find the funding to equip the school with enough state-of-the-art equipment in order that teachers and students can experience the richness of technology enhanced learning. As challenging as raising money is, it is clear that money follows vision. If the principal is able to articulate a clear vision and a compelling case, the money will come.

The two tasks that demand the principal's leadership are to articulate the vision and find funding.

Masterplan Goals and Strategies Directed at Principals

The technology taskforce directed some very significant goals and strategies to the principal of each school.

Committee I: Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking determined there were two major areas that the principal needed to coordinate. The first goal calls for the principal to facilitate a planning process to develop a site level technology plan. In order to assist the principal in this task, this committee developed an outline of a planning process very similar to the process used by the diocesan taskforce to create the Masterplan. Further,

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the committee volunteered their time and expertise to assist the principal in beginning the planning process.

The second two goals directed to the principal by Committee I addressed the need to obtain assistance in the areas of hardware acquisition, hardware maintenance and networking. Because of the technical competence needed in these areas, it is possible that outside consultants may need to be hired for a set number of hours per week. Some schools have been very creative in collaborating in the hiring of one or more persons who would go from school to school on a weekly basis. Five to ten hours per week is an estimate of the amount of time technical assistance would be needed to maintain hardware and networks. The goals and strategies from Committee I follow.

Committee I: Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking

Goal 1: The technology taskforce recommends that all schools develop a three to five year technology plan and, to facilitate that planning, enlist the services of a consultant or technical specialist.

- **Strategy 2:** Each principal in the diocese will commit to beginning a technology planning process by September 1994, with a targeted completion date of June 1995.

Goal 4: The department of education and individual schools will collaborate in providing information and training in the use of hardware.

- **Strategy 1:** By September 1994, each principal will designate one or more persons on site to be responsible for school computer hardware.
- **Strategy 2:** By September 1994, each principal will identify a paid or unpaid person that will be responsible for the repair, upkeep and maintenance of computer hardware.

Goal 6: The technology taskforce recommends that all involved in planning, including administrators and technology resource personnel, develop a basic understanding of the technical issues related to networking.

- **Strategy 1:** By June 1995, each principal will designate one person on-site to be responsible for the school's network and identify a paid or unpaid person that will be responsible for repair, upkeep and maintenance of the school's network.

Committee II: Curriculum Applications, Software Selection and Evaluation directed one goal to the principal of each school. That goal called on the principal to lead the faculty in applying technology to all aspects of the curriculum. The strategies suggest that the principal and teachers should set technology goals as part of the annual personal/staff development plans and that the accomplishment of these goals be evaluated as part of the annual formal evaluation. Further, the committee directed the principal to consider needed in-service for the teachers and the time to

learn how to integrate technology into their day-to-day learning activities. The goal and strategies from Committee II follow.

Committee II: Curriculum Applications, Software Selection and Evaluation

Goal 3: The technology taskforce recommends that all principals and teachers integrate the use of technology into the curriculum on a regular basis beginning in the 1994-95 school year.

- **Strategy 1:** The taskforce recommends that specific annual technology goals should be set by principals and teachers and integrated into their personal/staff development plans.
- **Strategy 2:** The taskforce recommends that the principal include growth in knowledge of and integration of technology in teaching in the teachers formal annual evaluation.
- **Strategy 3:** The taskforce recommends that the principal include technology education in school site in-service plans.
- **Strategy 4:** The taskforce recommends that the department of education and principals explore ways of providing teachers with more time to learn how to integrate technologies.

Committee III: Staff Development, Recommendations for Teacher and Student Competencies directed four goals at principals for implementation.

In its first two goals, this committee recognized that staff development was, perhaps, the most important and most difficult issue. Unless teachers understand and value technology in the classroom, it is unlikely that real change will happen. To this end, the committee recommended that teachers participate regularly in staff development activities. The three strategies that follow this goal give some suggestions to the principal and teachers concerning on and off campus opportunities and resources. The committee strongly directs the principal to use incentives in order to motivate teachers to seek ways to become more technologically competent in their teaching.

In its last two goals, Committee III directed the principal to require the accomplishment of a list of competencies by both students and teachers. (See Figures 8 and 9.) These requirements have been modified and expanded over the past three years. Presently, the committee is developing a self-assessment of skills that can be used by students and teachers. The results of the assessment will be helpful to the principal, the department of education and the taskforce in designing staff inservice. The four goals of this committee follow.

Committee III: Staff Development, Recommendations for Teacher and Student Competencies

Goal 1: The taskforce recommends that all teachers stay informed about current

computer/technology trends in education by participating regularly in training and inservice programs.

- **Strategy 1:** The school administrator will provide time monthly for presentations on computer/technology topics of general interest and need. These presentations will include creative uses of proven software/hardware as well as information about new products and may be conducted by the technology coordinator and/or classroom teachers; other presentations may be found on videotapes, or be downloaded from a network.
- **Strategy 2:** The principal will provide on-site training by professionals as needed to promote computer/technology competency. This training may include contracting with consultants/experts, acquiring training videotapes, arranging for vendor's presentations or having guest speakers from other schools.
- **Strategy 5:** The taskforce encourages all to seek personal growth in computer/technology competency by participating in classes and workshops offered by local universities, the county office of education, the institute of computer technology, the tech museum, computer stores, vendors, and by attending professional conferences such as the computer using educators and MECC conferences.

Goal 2: The taskforce recommends that schools offer training/inservice incentives and makes the following recommendations to the school site administration.

- **Strategy 1:** The principal of each school needs to require that each teacher have a technology goal as one of his/her yearly goals in the professional growth plan.
- **Strategy 2:** The evaluation of teachers and principals will include a technology component.
- **Strategy 3:** The principal will send at least one representative to a local technology workshop/convention annually.
- **Strategy 4:** The principal will provide release time to allow teachers to view technology at another school.
- **Strategy 5:** The principal will consider other incentives such as the following: contract renewal requirement, professional growth credit, release time, summer loan computers, access to materials for use in the classroom or office, stipends for hours spent in specific training.

Goal 3: All those teaching in the diocese should be able to do the following by the end of the 1994-95 school year:

- Demonstrate basic keyboarding skills
- Be able to integrate appropriate software in teaching
- Be able to access a network
- Use database and/or spreadsheet for inventories, budgets, student records, rosters, etc., as needed

Goal 4: Schools will implement extensive hands-on computer/technology experience for all students assuring that students attain skills and hardware/software competencies at specific intervals. The taskforce will establish specific recommendations for grade level proficiencies in the 1994-95 school year for implementation in 1995-96.

Committee IV: Administrative Uses, Funding, Security, Maintenance, Ethical Uses also developed multiple goals for principals. The two goals that the committee has emphasized to date are: the ethical use agreement and the use of administrative software. It is the recommendation of the committee that all who will use the school's technology sign an ethical use agreement. (See Figure 11.) This includes all faculty and staff, parents and all students. Signing the ethical use agreement assumes that education about the proper use of technology has taken place. All who use the Internet are aware of some dangers; the committee believes that education about the proper use is as important as supervision of use.

Currently, the committee is working with schools to pilot administrative software that will expedite administrative tasks and reports. This committee is also concerned with security, maintenance and budgeting. Their goals follow.

Committee IV: Administrative Uses, Funding, Security, Maintenance, Ethical Uses

Goal 1: The taskforce recommends that principals analyze the ways technology can streamline and improve the quality and quantity of the work of the school for teachers and administrators including reports, newsletters, financial bookkeeping and reporting and, to accomplish this goal, makes the following recommendations:

- **Strategy 1:** The principal should provide a workstation, which would include a computer, a modem and printer access for the exclusive use of the faculty for the 1994-95 school year.

Goal 2: The technology taskforce recommends that all users sign an ethical technology use agreement, which the taskforce will develop during the 1994-95 school year, including the following topics:

- Adherence to license agreements
- Restriction of use of privately-owned hardware and software
- Safeguards against computer viruses
- Purchase of computer-related supplies
- Security measures: maintenance of confidentiality
- School ownership of information
- Safeguarding of data
- Storage of data

- **Strategy 1:** Technology users, e.g., staff, volunteers and students will sign an ethical agreement before gaining access to the system.

Goal 3: The taskforce recommends that principals provide adequate security for stand alone and networked technology. This includes the storage of documents, data, hardware and software.

- **Strategy 1:** The principal and the technology resource person are responsible for the development and maintenance of technology security issues.
- **Strategy 2:** The school administration will educate the technology users regarding security concerns at the beginning of each year.

Goal 4: The taskforce recommends that principals obtain the services of trained personnel to maintain equipment. There are generally two or three levels of support needed: onsite, contracted services, and expert advice.

- **Strategy 1:** The department of education will research the feasibility of a technical training course during 1994-95 school year to develop technology resource persons capable of performing onsite first level technology support. The cost of the training will be the responsibility of the school sites.

Goal 5: The taskforce recommends that the principal make financial projections for hardware, software, training and ongoing materials and supply costs realizing that technology expenses are on-going.

- **Strategy 1:** The budgets of the schools should address the financial needs for the maintenance of current technology and build capital funds for the purchase of advanced technologies.
- **Strategy 2:** Each school will develop a three to five year technology plan which will include a vision statement, development of financing and staff training by June of 1995.

Chapter Five:
THE ADVANTAGES OF PLANNING TOGETHER

From the chalkboard to the chatroom..and how to get there from here? Diocesan-wide planning is the answer of this taskforce. It just makes sense for a diocese to bring together representatives of the K-12 educational community to plan for technology integration into the schools. There are several significant reasons why it makes sense.

Creative energy is unleashed

Creativity was contagious when twenty-three enthusiastic educators came together to talk about their vision for all students in the diocese. It is hard to imagine that a school faculty, no matter how creative, could match the vision and energy of this taskforce.

Collaboration builds a community of schools

Schools are not always aware of how much they have in common and how much there is to share in the area of technology. In fact, during the planning process, each person on the planning team contributed valuable experience and offered assistance to help others achieve common goals. A stronger bond has resulted among our schools because of this collaboration.

Expertise is gained

Facilitating a meeting of the most talented technological minds from a diocese is a very effective way to share knowledge and to avoid sometimes costly mistakes. Not only did the group teach one another, it learned as well.

Costs are shared or reduced

Joint planning also means the ability to make group purchases of district licenses for software and hardware. And, while it is possible to do group purchasing outside of a planning process, it can be a much more difficult task.

Efficiency is achieved

It is a waste of time and money for every school to do every task. It is simply not necessary for everyone to develop an ethical use contract, a planning guide, student competencies and staff inservice programs. Everyone benefits from each single contribution.

Planning as a diocese and at the individual school level is at the heart of the progress the San Jose Diocesan schools have made over the last three years. The last sentence of the mission statement from the Masterplan succinctly summarizes the reason for these considerable efforts:

The Goal of all of these efforts is to offer the best educational opportunities for all students to reach their potential and to allow them to learn with excitement, a sense of discovery and a sense of wonder.

APPENDIX A

As with the principal and taskforce chapters earlier, goals and strategies were directed toward the Department of Education and teachers as well.

Masterplan Goals and Strategies Directed Toward the Department of Education

Committee I:
Computer Hardware, Multimedia Resources, Facilities Preparation and Planning for Networking

Goal 1: The technology taskforce recommends that all schools develop a three to five year technology plan and, to facilitate that planning, enlist the services of a consultant or technical specialist.

- **Strategy 4:** The department of education will collect computer planning documents and facility plans from the schools and make them part of a diocesan-wide technology sharing project.

Goal 2: The department of education will facilitate the sharing of hardware information among schools, especially the technology projects undertaken at the various school sites.

- **Strategy 3:** The department of education will insure that information about hardware, including new products on the market, will be exchanged at technology coordinator meetings.

Goal 3: The department of education will investigate with CTN and other providers the feasibility and practicality of networking teachers, administrators and students throughout the system.

- **Strategy 1:** The superintendent and assistant superintendent will continue to meet with the staff at CTN and other providers to discuss the feasibility and viability of having an agency provide networking capability throughout the diocese, and communicate the outcome to the taskforce.

Goal 5: The technology taskforce will recommend to the principal of each elementary and high school minimum standards for the acquisition of hardware for classroom and multimedia use and will publish the recommendation.

- **Strategy 2:** The department of education will annually review the minimum technology standard for elementary and secondary schools and update it as necessary.

Goal 6: The technology taskforce recommends that all involved in planning, including administrators and technology resource personnel, develop a basic understanding of the technical issues related to networking.

- **Strategy 3:** The department of education will include an overview of network issues in technology inservices, including the requisite hardware for networking.

Committee II:
Curriculum Applications, Software Selection and Evaluation

Goal 2: The taskforce will develop creative ways to involve teachers in the planning of technology integration into specific areas of the curriculum.

- **Strategy 1:** The department of education will consider appropriate funding options (e.g., grants, school subsidies) or other ways (e.g., CUE's compensating teachers for developing models/units for integrating technology into the curriculum.

Goal 3: The technology taskforce recommends that all teachers integrate the use of technology into the curriculum on a regular basis beginning in the 1994-95 school year.

- **Strategy 4:** The taskforce recommends that the department of education and principals explore ways of providing teachers with more time to learn how to integrate technologies.

Committee III:
Staff Development, Recommendations for Teacher and Student Competencies

Goal 1: The taskforce recommends that all teachers stay informed about current computer/technology trends in education by participating regularly in training and inservice programs.

- **Strategy 3:** The department of education will support and encourage continuing growth in computer/technology competency by sponsoring whole diocese technology inservice days, training at cluster levels, technology video conferences in conjunction with CTN, and by arranging demonstrations and training sessions by vendors.
- **Strategy 4:** The department of education will sponsor and give direction to a technology coordinators' committee and require attendance at meetings by a representative from each school.

Committee IV:
Administrative Uses, Funding, Security, Maintenance, Ethical Uses

Goal 2: The technology taskforce recommends that all users sign an ethical technology use agreement, which the taskforce will develop during the 1994-95 school year, including the following topics:

- Adherence to license agreements
- Restriction of use of privately-owned hardware and software
- Safeguards against computer viruses

- Purchase of computer-related supplies
- Security measures, such as:
  - maintenance of confidentiality
  - school ownership of information
  - safeguarding of data
  - storage of data
- **Strategy 1:** Technology users, e.g., staff, volunteers and students, will sign an ethical agreement before gaining access to the system.

Goal 4: The taskforce recommends that principals obtain the services of trained personnel to maintain equipment. There are generally two or three levels of support needed: onsite, contracted services and expert advice.

- **Strategy 1:** The department of education will research the feasibility of a technical training course during 1994-95 school year to develop technology resource persons capable of performing onsite first level technology support. The cost of the training will be the responsibility of the school sites.

APPENDIX B

As with the principal and taskforce chapters earlier, goals and strategies were directed toward the Department of Education and teachers as well.

Masterplan Goals and Strategies Directed Toward the Teachers

Committee I:
Computer Hardware, Multi-Media Resources, Facilities Preparation and Planning for Networking

Goal 2: The department of education will facilitate the sharing of hardware information among schools, especially the technology projects undertaken at the various school sites.

- **Strategy 2:** For the 1994-95 school year, a system will be established by which diocesan teachers can share reviews of recently purchased hardware. The process may include written reviews or participation in a conference group over a diocesan-wide network.

Committee II:
Curriculum Applications, Software Selection and Evaluation

Goal 3: The technology taskforce recommends that all teachers integrate the use of technology into the curriculum on a regular basis beginning in the 1994-95 school year.

- **Strategy 1:** The taskforce recommends that specific annual technology goals should be set by principals and teachers and integrated into their personal/staff development plans.

Committee III:
Staff Development, Recommendations for Teacher and Student Competencies

Goal 1: The taskforce recommends that all teachers stay informed about current computer/technology trends in education by participating regularly in training and inservice programs.

- **Strategy 5:** The taskforce encourages all involved in the school to seek personal growth in computer/technology competency by participating in classes and workshops offered by local universities, the county office of education, the

institute of computer technology, the tech museum, computer stores, vendors, etc., and by attending professional conferences such as the computer using educators and MECC conferences.

Goal 3: All those teaching in the diocese should be able to do the following by the end of the 1994-95 school year:

- Demonstrate basic keyboarding skills
- Be able to integrate appropriate software in teaching
- Be able to access a network
- Use database and/or spreadsheet for inventories, budgets, student records, rosters, etc.

Committee IV: Administrative Uses, Funding, Security, Maintenance, Ethical Uses

Goal 2: The technology taskforce recommends that all users sign an ethical technology use agreement, which the taskforce will develop during the 1994-95 school year, including the following topics:

- Adherence to license agreements
- Restriction of use of privately-owned hardware and software
- Safeguards against computer viruses
- Purchase of computer-related supplies
- Security measures, such as
  - maintenance of confidentiality
  - school ownership of information
  - safeguarding of data
  - storage of data

- **Strategy 1:** Technology users, e.g., staff, volunteers and students will sign an ethical agreement before gaining access to the system.

Assistant superintendent Marian Stuckey discusses the planning and implementation of a diocesan and school site technology plan. Her work on the central technology planning taskforce—whose members included educators, school and diocesan administrators, parents and technology coordinators—led to the production of this guide and serves as the basis for many other technology resources for Catholic schools.

Planning Steps:

Step One:	Determining the current status
Step Two:	Getting organized
Step Three:	Establishing the direction
Step Four:	Building the plan
Step Five:	Making the plan a reality
Step Six:	Evaluating and adjusting the plan

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